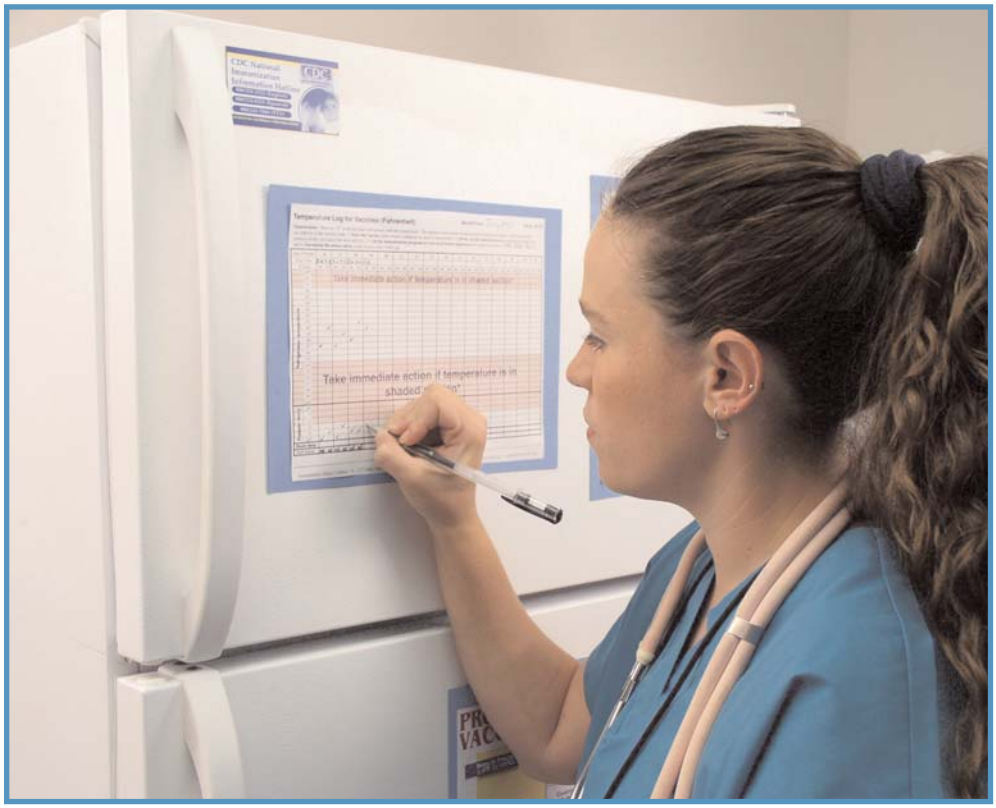
Contents

Checking and Recording Temperatures at Least Twice a Day

The recommended method to ensure that a refrigerator or freezer is maintaining the proper temperature for vaccine storage is to check and record the temperature at least twice a day. This recommendation applies regardless of whether or not there is a temperature alarm, a chart recorder thermometer, or a digital data logger.



Check and record temperatures at least twice a day.

1. Post a temperature log on the vaccine storage unit door (see Resources / Fahrenheit Temperature Log and Celsius Temperature Log).
2. Read the thermometers in both the refrigerator and freezer at least twice a day: once in the morning when the storage unit door is opened for the first time, and again at the end of the clinic day just before the storage unit door is closed for the last time. (See How to Read a Fluid-Filled Biosafe Liquid Thermometer, How to Read a Liquid Minimum/Maximum Thermometer—Print Version, How to Read a Liquid Minimum/Maximum Thermometer—Animated Version, How to Read a Chart Recorder—Print Version, and How to Read a Chart Recorder—Animated Version in the Resources section for details).
3. Record the temperatures in both the refrigerator and freezer on the temperature log each time the thermometers are read. Twice daily temperature monitoring and recording is required even if a continuous graphing/recording thermometer or a digital data logger is used.
4. Record the times the thermometers were read, and have the person reading the thermometer and recording the temperature initial the temperature log.
5. If a temperature reading is missed, the blank log entry should remain blank. Do not guess what the temperature was.

Do not faithfully record the temperatures on the log and then fail to take action when the temperature in either the refrigerator or freezer is outside the recommended range for vaccine storage. ⚠ **Immediate action** must be taken to protect the vaccines. Furthermore, this action should be documented (see Chapter 7 / Handling Inappropriate Vaccine Storage Conditions [Light and Temperature] for details).

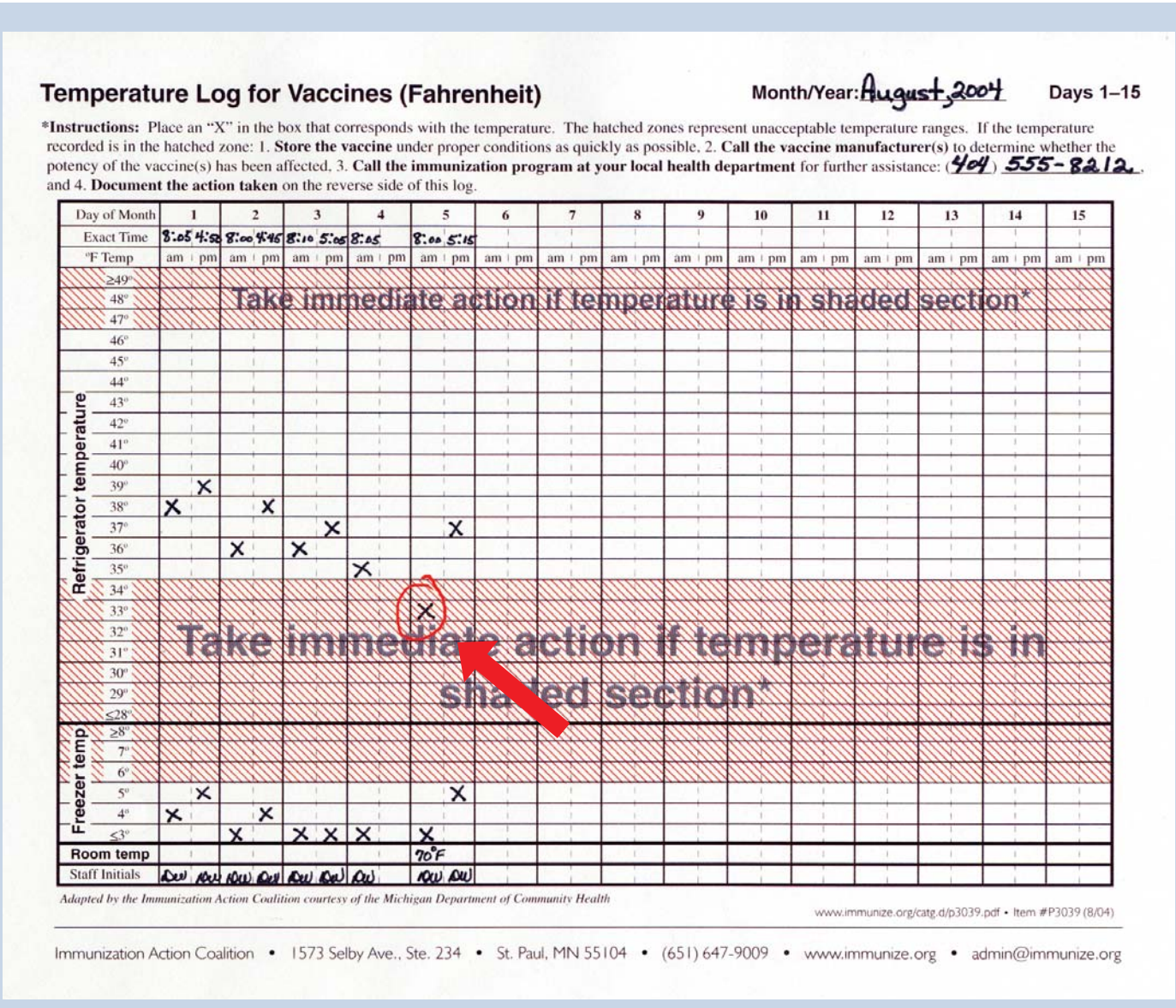
Reviewing Temperature Logs

If other staff are monitoring and recording the temperatures, the primary vaccine coordinator should review the log weekly to ensure proper temperature recording. If the vaccine coordinator is the person monitoring and recording the temperatures, the backup vaccine coordinator should review the log weekly.

The primary vaccine coordinator should review the log weekly to ensure proper temperature recording.

Noting Equipment Failures and Room Temperatures

The date and time of any mechanical malfunction or power outage should be recorded. This information may be recorded on the temperature log or on some other document, for example the Emergency Response Worksheet in the Resources section. As with inappropriate storage temperatures, ⚠ **immediate action** must be taken to correct these situations. See Chapter 7 / Handling Malfunctioning Vaccine Storage Units and Chapter 7 / Power Outages for further details.



Temperature Log for Vaccines (Fahrenheit) Month/Year: August 2004 Days 1–15

***Instructions:** Place an "X" in the box that corresponds with the temperature. The hatched zones represent unacceptable temperature ranges. If the temperature recorded is in the hatched zone: 1. **Store the vaccine** under proper conditions as quickly as possible. 2. **Call the vaccine manufacturer(s)** to determine whether the potency of the vaccine(s) has been affected. 3. **Call the immunization program at your local health department** for further assistance: (404) 555-8212. and 4. **Document the action taken** on the reverse side of this log.

Day of Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Exact Time	8:05 4:58	8:00 4:45	8:10 5:05	8:05	8:00 5:15										
°F Temp	am pm	am pm	am pm	am pm	am pm	am pm	am pm	am pm	am pm	am pm	am pm	am pm	am pm	am pm	am pm
≥49°															
48°	Take immediate action if temperature is in shaded section*														
47°															
46°															
45°															
44°															
43°															
42°															
41°															
40°															
39°	X														
38°	X	X													
37°			X		X										
36°		X	X												
35°				X											
34°															
33°					X										
32°	Take immediate action if temperature is in shaded section*														
31°															
30°															
29°															
≤28°															
≥8°															
7°															
6°															
5°	X				X										
4°	X	X													
≤3°		X	X X	X	X										
Room temp					70°F										
Staff Initials	DW	RW DW	DW DW	RW DW	DW										

Refrigerator temperature

Freezer temp

Adapted by the Immunization Action Coalition courtesy of the Michigan Department of Community Health

www.immunize.org/catg.d/p3039.pdf • Item #P3039 (8/04)

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Front: Temperature Log for Vaccines. Note: ⚠ Immediate action must be taken to correct improper vaccine storage conditions.

Vaccine Storage Troubleshooting Record

Date	Time	Storage Unit Temp	Room Temp	Problem	Action Taken	Results	Initials
8/20/04	8:00 am	Refrig. 33°F	70°F	Refrigerator temperature 2° lower than acceptable.	Supervisor notified and thermostat adjusted. Temperature in refrigerator and freezer monitored every half hour. State contacted	Refrigerator temperature stabilized at 37°F and freezer temperature stabilized at 5°F	DW

Back: Vaccine Storage Troubleshooting Record.

If a mechanical malfunction or power outage has occurred, the room temperature where the vaccine storage unit is kept should also be recorded. If the cold chain is broken, the room temperature is useful information that will help the vaccine coordinator, the health department officials, and/or the vaccine manufacturer decide how best to handle compromised vaccine. Have a thermometer in the room for measuring the room temperature—a standard household thermometer (the sort you find in a hardware store) is fine for this purpose. **Do not** remove the certified calibrated thermometer from the refrigerator or freezer to measure the room temperature. **Do not** rely on the room thermostat setting.

If a mechanical malfunction or power outage has occurred, the room temperature where the vaccine storage unit is kept should also be recorded.

Maintaining Temperature Logs

Maintain an ongoing file of temperature logs and store completed logs for 3 years (unless state statutes or rules require a longer period). Do not throw away temperature logs before 3 years. As the vaccine storage unit ages, you can track recurring problems or identify how long problems have existed by referring to old temperature logs. If a continuous recording/graphic thermometer is used, the graphs should be kept with the logs for 3 years.

Store completed logs for 3 years (unless state statutes or rules require a longer period).

Using Alarm Systems

Facilities storing large vaccine inventories may want to consider installing continuous monitoring temperature alarm systems to help prevent substantial financial loss if the temperatures in their storage units exceed the recommended ranges or if the storage units malfunction. See Chapter 4 / Temperature Alarms for more details. If alarm systems are used, temperatures must still be checked and recorded twice a day.

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